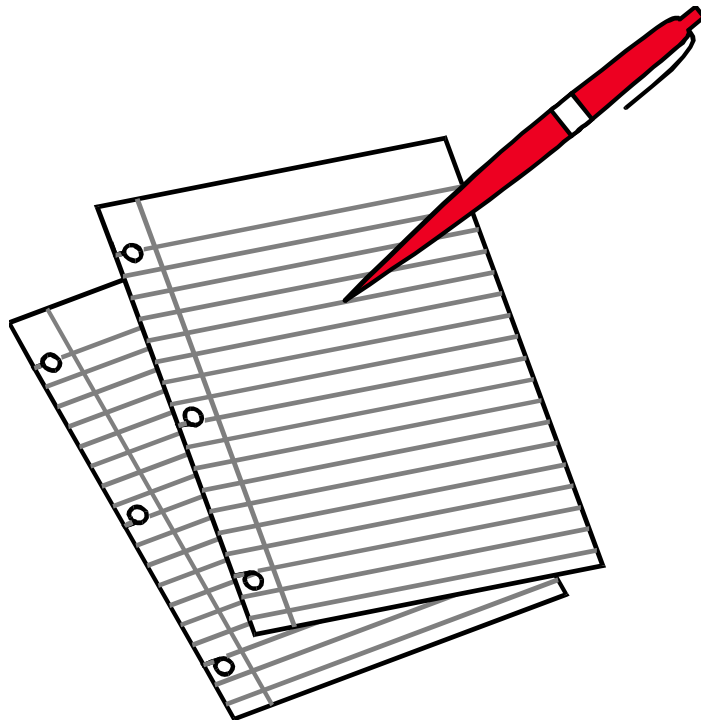


Section D

Articles for Publication



"FOOD & FITNESS: HEALTH FOR A LIFETIME"

Eat Right America®

Nutrition Articles for CY 2000 and National Nutrition Month

- JANUARY** - CPT Flash: January is National Diet Month....Make A Commitment to Maintain A Healthy Weight
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January is National Diet Month... Make A Commitment to Maintain A Healthy Weight

CPT Sarah Flash, MBA, RD, LD
U.S. Army Quartermaster Center & School

Those good intentions...New Year's Resolutions. For many, this year's resolution may be to shed those unwanted pounds. In June 1998, the first federal guidelines on the identification, evaluation, and treatment of overweight and obesity in adults were released. Now defining "overweight" is a Body Mass Index (BMI) of greater than 25. (See BMI chart below to determine your BMI). As your BMI increases, especially above 27, so does your risk for developing heart disease, diabetes, gallbladder disease and high blood pressure. However, weight must be considered in the overall context of health and the best weight for the individual. If you are fit and muscular, you may register a high BMI because muscle weighs more than fat.

At least half the adult population in the United States is somewhat overweight, and more than 33% are obese or 150% or more of their ideal body weight. Overconsumption of calories and lack of physical activity associated with obesity contribute to more than 300,000 potentially avoidable deaths each year. Studies show that dietary patterns of Americans differ widely, but most Americans eat a diet that could be described as "in need of improvement".

Because we are a society of instant gratification, we want the weight off instantly, and will go to unusual lengths to accomplish the mission in record time. Unfortunately, long-term weight loss success means developing long-term healthy eating and exercise habits that quick weight loss programs do not promote. Quick weight loss is usually the result of water loss and loss of lean body mass giving a false impression of weight loss (high-protein, low-carbohydrate diets are known for this). Excessive protein intake can stress the kidneys and lead to calcium loss from the bones; and depending on the type of protein food consumed, may be high in fat, saturated fat and cholesterol. Diets lacking the recommended 50-60% carbohydrates will also likely be inadequate in fiber and nutrients.

According to the FDA, weight loss schemes are one of the leading forms of fraud in the United States. Read a diet carefully before you invest time and money or risk health and set yourself up for frustration. Consider the following "red flags" to weight loss plans:



Red Flags of Hazardous Weight Loss Plans

1. Very Low Calorie - a normally active woman trying to lose weight should consume at least 1800 calories per day (even more for men). Many “popular” fad diets promote intakes of 1200 calories or less. Very low calorie intakes also limit intake of important vitamins and minerals.
2. “Forbidden Foods” - All foods can fit into a healthful eating plan. Depriving yourself can lead to bingeing and loss of interest in healthy eating. Limit less-nutritious foods to small amounts.
3. Sells supplements or pills as part of the program - No magic pill or potion is going to melt the fat away! Some supplements can be dangerous to your health.
4. Infrequent meals - It is best to eat when physiologically hungry. For most people that is every 4 hours. Skipping meals can zap your energy and lead to binges later. Also skipping meals can reduce your metabolism.
5. Speedy results - For healthy, permanent weight loss, you should aim to lose no more than 1-2 pounds per week.
6. No exercise - Weight loss plans should incorporate at least 30 minutes of moderate intensity exercise 4-5 days per week. Exercise helps maintain lean body mass and burn calories.
7. “No substitutions” or eating certain foods exactly as prescribed. How rigid is that?
8. Short-lived. What happens after the 3, 5, or 7-day diet is over?
9. Requires special foods purchased from a special store or dealer. This is expensive and you can not eat these foods forever! Remember long-term.

See the BMI Chart below to determine your BMI

How to determine BMI:

Body Mass Index = weight in kilograms divided by height in meters² (kg/m²).

To determine weight in kilograms: weight in pounds divided by 2.2

To determine height in meters: height in inches divided by 39. Then square it by multiplying that number by itself. For example, if you get 1.7, multiply 1.7 x 1.7 for m².

Example. Person who is 70 inches and 200 pounds has a BMI of 28.

200 pounds divided by 2.2 = 91 kg

70 inches divided by 39 = 1.8 meters. 1.8 x 1.8 = 3.24 m²

91 kg divided by 3.24 m² = 28

Helpful Hints for Weight Control

CPT Lori Hennessy, MHA, RD

U.S. Army Physical Fitness Research Institute

What you must know to lose weight:

1. **Diets don't work.** If you have ever been on a diet, you know that dieting does not work. Eventually, dieting and denial lead to overeating and often, binge eating.
2. **Calories do count.** If you eat more calories than what you are burning off through exercise and daily activities, you will gain weight. On the other hand, eating fewer calories than what your body requires will result in weight loss. Reducing the fat in your diet will help reduce total caloric intake, but only if you consume appropriate portion sizes and reduce your caloric intake. Just because you're eating fat-free cookies doesn't mean that you're entitled to the whole box in 2 days. Calories add up whether they're calories from protein, carbohydrates, or fat.

The following are 10 tips for successful weight reduction as outlined in Nancy Clark's Sports Nutrition Guidebook:

1. **Write down what and when you eat or drink in a day and why.** Keeping accurate food records of every bite you take can help identify why you are eating (happy, sad, hungry, bored). Plus, it's amazing to find out how the little snacks add up during the day. A few handfuls of peanuts or M&Ms can easily contribute 500 to 800 extra calories.
2. **Become aware of meal timing.** You may eat lightly during the day, but devour dinner and snacks throughout the evening. Experiment by eating a considerable breakfast and lunch and eating lightly for dinner. Usually, people are most active during the day, so it only makes sense to consume the bulk of our calories during this time. Some people aren't hungry for breakfast because they consume too many calories in the evening.
3. **Learn your calorie budget.** Know how much you can eat to lose weight and still maintain your energy. To estimate your daily calorie requirement:

#1 Multiply your desired or goal weight by 10 to find your resting metabolic rate (RMR). This is the number of calories you burn at rest.

Example: Your goal weight is 170#: $170 \times 10 = 1700$ calories

#2 Multiply RMR by your daily activity level.

Sedentary 20-30%

Moderately active 40-60%

Very active 70-80%

Example: you are moderately active.

$1700 \times .4 = 680$ calories burned through physical activity.

#3 Add Steps #1 and #2 to determine daily calorie requirements.

$1700 + 680 = 2380$ calories per day to maintain weight.

#4 To lose weight, subtract 500.

$2384 - 500 = 1884$ calories per day to lose about 1 pound a week.

4. **Divide your calorie budget into at least 3 parts of the day.** If you are eating 1800 calories a day to lose weight, divide your calories into three parts of the day:

Breakfast/snack 600 calories

Lunch/snack 600 calories

Dinner/snack 600 calories

You may even want to eat 4 to 6 mini-meals throughout the day. You will not gain weight from eating breakfast and lunch as long as you don't consume more calories than what you need. If anything, you will be less hungry at the end of the day, which will help eliminate or reduce overeating in the evening.

5. **Read food labels.** Be aware of how many calories are in a serving and, more importantly, how many servings are in a container! Your bowl of cereal in the morning may actually be 3 or 4 servings of cereal. A single muffin may contain 2 to 3 servings, which means you could be consuming 400 – 500 calories and 50 grams of fat... just from one muffin!

6. **Eat slowly.** The brain needs about 20 minutes to receive a signal that you're full; it doesn't matter how much food you've consumed during this time. Try to pace your eating by putting the fork down between bites, chewing slowly, and enjoying your food.

7. **Eat your favorite foods regularly.** Believe it or not, you can still eat your much-loved potato chips and lose weight. If you deny yourself permission to eat your favorite foods, you are much more likely to binge. A handful of potato chips once or twice a week is much better than devouring a whole bag in 30 minutes after days of denial!

8. **Stay away from foods that tempt you.** Out of sight, out of mind, and out of mouth. Storing cookies and other fattening snacks in see-through containers on the counter will more than likely tempt you every time you walk by. Store them in areas out of sight. Better yet, keep tempting foods out of the house.

9. **Exercise consistently.** Exercise regularly but don't overdo it. Don't punish yourself after a day of overeating by pushing yourself twice as hard or twice as long. One day of overeating will not make you gain weight. Remember that it takes 3,500 extra calories to gain one pound of weight. Realistically, it's almost impossible to consume this amount over your required needs to gain 1 pound in a day.

10. **Think Fit and Healthy!** Every day, visualize yourself as getting fitter and leaner. Be patient with yourself; you didn't gain weight over night. Changing your eating and exercise habits for life takes time. Positive self-talk is very important to your well being and will help not only with weight loss, but also with daily living.

The DASH Diet

CPT Lori Hennessy, RD

Army Physical Fitness Research Institute

Do you need to reduce your high blood pressure? Try the “Dietary Approaches to Stop Hypertension” diet, also called the DASH diet. The eating plan is rich in fruits and vegetables and low fat dairy foods, and low in saturated and total fat. A study conducted by Harvard University and funded by the National Heart, Lung, and Blood Institute has shown that the following guidelines help reduce high blood pressure in most people.

The DASH Diet:

Food Group	1 serving equals
Grains and grain products 7-8 servings/day	1 slice bread, 3/4 cup dry cereal, ½ cup cooked rice, pasta or cereal
Vegetables 4-5 servings/day	1 cup raw leafy vegetables, ½ cup cooked vegetable, 6 oz. vegetable juice
Fruits 4-5 servings/day	6 oz. fruit juice, 1 medium fruit, ¼ cup dried fruit, ½ cup fresh, frozen, or canned fruit
Low fat or nonfat dairy products 2-3 servings/day	8 oz. milk, 1 cup yogurt, 1.5 oz. cheese
Meats, poultry, fish 2 or less servings/day	3 oz. cooked meats, poultry, or fish (about the size of a deck of cards)
Nuts, seeds, legumes 4-5 servings/week	1.5 oz. or 1/3 cup nuts, 2 TBSP seeds, ½ cup cooked legumes (peas, pinto/navy/kidney beans)

Limit sodium intake to no more than 3,000 milligrams (mg) per day. The average American consumes between 6,000 and 10,000 mg of sodium every day; only about twenty-five percent of the sodium is added by shaking salt on food. One teaspoon of salt equals approximately 2400 mg of sodium.

Discover the Joy of Soy for Better Health

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Soyfoods have gotten some powerful press over the last five years. Since 1980, consumption of soy protein in the U.S. has increased threefold. Two hundred new soy products are expected to enter the U.S. marketplace in 1999, including many new food products. Why? The soybean is hard to beat for versatility and nutrition. Soybeans contain the proper proportion of all eight essential amino acids necessary to be recognized as a complete protein. They are the only legume or dried bean that can make this claim. In addition, soy may help prevent some major diseases. In heart disease, soy helps lower blood cholesterol and possibly increase the good cholesterol. Also, it may prevent some forms of cancer, reduce symptoms of menopause and provide calcium to prevent osteoporosis.

Nutritionally soybeans are high in protein. For example, a 4 oz serving of tofu has as much protein as a comparable serving of hamburger. Soy foods are cholesterol free and relatively low in calories and saturated fat. Soybeans, and therefore soyfoods, are good sources of iron, phosphorus, potassium, B vitamins and the antioxidant vitamin E. Soybeans contain phytochemicals, which appear to protect against cancer, and fiber. Although they can be eaten whole after being boiled or roasted, most soybeans are transformed into a great variety of foods. Soy means a lot more than hamburger filler these days!

Soy protein is found in soy flour, tofu, tempeh, TVP (textured vegetable protein), soy milk and soy isolates like in soy protein powder. To reap the benefits of soy, start adding small amounts to your current eating plan, and add more as you get used to the taste and texture. If you are a new soy user, here are a few tips:

- Don't expect tofu to be good by itself. Tofu gains its flavors from the foods it is cooked with. Sauces are the key to making tofu tasty.
- Do buy the right tofu for the job. Tofu comes in various textures. For example, use soft/silken for smoothies, and firm or extra firm for stir-frying, broiling, baking or sautéing.
- Tofu and tempeh, along with many soy burgers, do not contain animal fat, and therefore may require the use of non-stick spray or oil when cooking.
- Don't replace all your flour with soy flour (which contains no gluten) in yeast breads. Without gluten yeast breads will not rise. Use about ¼ cup of soy flour per cup of unbleached white flour.
- Drink soy milk **cold**, just like cow's milk.
- Try halving your recipes, cutting down some of the meat in chili or spaghetti sauce with textured vegetable protein, for example, or replacing half your scrambled eggs with tofu.

To find out more about soy and soy products visit <http://www.soyfoods.com>

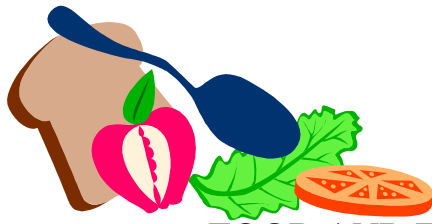
Easy Fruit Soy Smoothie

- 1 10.5-ounce package soft lite silken tofu
- 1 medium banana
- 2 cups (16 oz) orange-pineapple juice, chilled
- 1 8-ounce can crushed pineapple, chilled

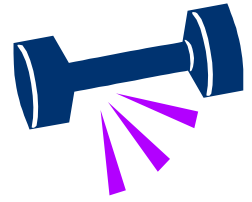
Combine in blender and blend until smooth.

Serving: 1 cup

144 calories, 5.8g protein, 3g fat



FOOD AND FITNESS: HEALTH FOR A LIFETIME



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Bolling AFB, Washington, DC

Can you believe it is March already? Remember those New Year's resolutions you made one month ago? If you are like many Americans, your goal was to shed those unwanted pounds in the new millennium. And like many, you probably tried the latest dieting craze or vowed to visit the gym daily until you reached your goal weight. And like many, you probably were very committed for a couple of weeks or so and then fell back into your old habits. The time has come to change those old bad habits into new healthy habits that will last a lifetime.

March is National Nutrition Month and this year the theme is "Food and Fitness: Health for a Lifetime." The focus is on developing healthy habits that will not only help you achieve your New Year's Resolution, but also keep you healthy and fit throughout the year. The 7 Dietary Guidelines for Americans published by the U.S. Department of Health and Human Services are a good tool to guide you to a healthier way of life.

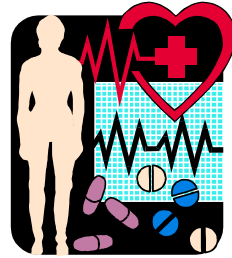
1. Eat a variety of foods. It is important to include foods from all the major areas: breads and starches, fruits, vegetables, milk and dairy, and meat and protein. If you only eat foods from one main area you might fall short in getting the required nutrients you need to maintain your health.
2. Balance the food you eat with physical activity – maintain or improve your weight. Exercise is the key to losing and keeping off unwanted pounds. Exercise doesn't mean you have to hit the gym everyday – take a brisk walk around the block or take a bike ride – just get moving!
3. Choose a diet with plenty of grain products, vegetables, and fruits. Boosting your intake of vegetables and fruits to 5 servings day will help you get the required vitamins and minerals, not to mention help fight some types of cancer. Choosing whole grain products will help you get in the recommended 25-30 grams of fiber you need daily.
4. Choose a diet low in fat, saturated fat, and cholesterol. Lowering the fat, especially saturated fat, in your diet will help you cut extra calories and reduce your risk of heart disease and stroke. To reduce fat in your diet trim the fat off meat and use a cooking spray. Try having a meatless meal, beans and rice is a great low fat entrée.
5. Choose a diet moderate in sugars. Soda, cookies, and candy all have a majority of their calories from sugar and fat. By switching to sugar free drinks or water and snacking on fresh vegetables you can reduce the amount of sugar in your diet.

6. Choose a diet moderate in salt and sodium. Watching sodium and salt intake is especially important for those with high blood pressure. Reading food labels is useful in determining how much sodium you are getting, you only need 2,400 mg/day. Try to steer clear of regular canned soups, deli meats, and frozen TV dinners, these are some high sodium leaders.
7. If you drink alcoholic beverages, do so in moderation. Alcohol can provide a lot of extra calories without supplying any vitamins or minerals. Your best bet - keep your alcohol consumption to one drink 2-3 times/week.

The key to success is setting small goals and achieving these goals over time. If you set out to immediately implement all of the Dietary Guidelines today you are setting yourself up for failure. Pick one guideline and work toward achieving that one goal. Once that guideline has become part of your daily routine, start working on another. Before you know it you will be leading a healthier lifestyle and you won't need to make those New Year's Resolution to lose weight, get fit, or eat better – you can focus on something else!

Dietary Supplements: Are they safe?

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Vitamin, mineral, and herbal supplements are hot topics. Every problem seems to have a possible remedy. You might have heard some of the claims: “Ginseng promotes weight loss”, “Echinacea prevents colds and flu”, and “Garlic decreases the risk of cancer.” People want to feel better, look better, and have more energy. Are supplements a safe alternative?

In America the use of supplements has not been thoroughly researched. Supplements may help with some health problems and may not be harmful in small doses, but keep in mind the following general guidelines until the facts are better understood.

- Supplements do not replace a healthy diet. Vitamins, minerals, and herbal supplements can supplement a good diet but can’t substitute food. Food provides energy, vitamins, and minerals, among other benefits. It is important to eat a variety of foods each day.
- A multivitamin is appropriate for supplementing the diet. A good multivitamin will have 100% or less of the Recommended Dietary Allowance of each vitamin and mineral. They are meant to supplement, not replace the diet. Large amounts of vitamins, minerals, or herbs can be potentially toxic to the body. Most people who meet 100% of the average daily recommendation for vitamins and minerals will maintain their nutritional status.
- Supplements are not regulated by the Food and Drug Administration (FDA), which means the product may be poorly absorbed or what is inside the bottle may even differ from the label. Look for the letters USP (United States Pharmacopeia) on labels. United States Pharmacopeia is an independent nonprofit organization that tests supplements for absorption. Products labeled with USP are therefore more likely to contain the substance claimed on the label and the product is more likely to be absorbed in the body. Even when choosing a multivitamin, look for “USP” on the label. “A multivitamin does not have to be expensive,” says Major Wendy Larson, registered dietitian at Andrews Air Force Base Health and Wellness Center. Products labeled with “USP” are often found on generic or store brand supplements.
- Always consult your doctor about the supplements you use, especially if you use prescription medications. Some supplements may not be safe with certain medications. Just as a doctor does not prescribe the same medication for every patient, all dietary supplements are not appropriate for everyone.

Dietary supplements are not “quick fixes” for looking younger, having more energy, or curing disease. An overall healthy lifestyle is the key. Scientific research in the area of supplements is exciting. New discoveries are being made everyday. The supplement you are taking may be safe, but checking with your doctor first is always a good idea. And always use supplements in moderation to be on the safe side.

Sticks, Stones and a Calcium Deficiency May Break Your Bones...

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As a child, you learned this phrase, but did you know it would come around again, as you get older? If you did not know, the bone disease osteoporosis is a result of not eating enough calcium-rich foods. Not only is this disease painful, but it also results in hunchbacks, and broken bones. Because, bones are in a constant state of change – a small amount of every bone is being lost. At the same time, new deposits will restore them. With osteoporosis, there are no new deposits to replace what is being lost. At the end of this article, you will know whether or not you are at risk for osteoporosis and how to prevent it.

Are you at risk?

Osteoporosis risk varies between the sexes. Women are eight times more likely to have it than men are. The main cause of this difference is due to the female hormone estrogen, which helps to preserve bone. After menopause, estrogen production is reduced and the body relies on the bones to provide it with the necessary calcium, and therefore bones may become brittle. Men are at lower risk for developing osteoporosis because of their tendency to exercise more and their tendency to consume more calcium-rich foods than women.

A connection between smoking and osteoporosis has also been made. Studies show that smokers have less bone mass than non-smokers do. Therefore, a woman who smokes is putting herself at a higher risk for developing osteoporosis. The US Department of Health and Human Services has identified the following major risk factors:

- female
- early menopause (before age 45)
- white (caucasian)
- chronically low calcium intake
- lack of physical activity
- underweight
- family history of osteoporosis

How to make a high-calcium deposit

For your convenience, various types of calcium deposits are available. After understanding the various sources, you must decide which type of calcium deposit will give you the highest return.

Most of the calcium found in the food supply (75%) comes from milk products. When compared to other foods, milk products make the most valuable deposits. High-calcium products include nonfat and lowfat yogurt, swiss and cheddar cheese, and lowfat and skim milk. These foods are also rich in other vitamins and minerals that increase the value of the total deposit. Lactose-free products are also a high calcium choice for anyone who is lactose intolerant. These products are easily found in the dairy section of most grocery stores.

Other food deposits

Calcium can also be deposited from leafy green vegetables. Fresh spinach and turnip greens will donate to your total deposit. If you choose canned salmon or sardines, be sure to eat the bones, they are high in calcium too. Tofu that contains calcium sulfate, is also a weighty source of calcium. Grains and bread also supply a small amount. Each gift adds up to a precious deposit that is used to maintain bones and prevents osteoporosis.

Lump Sum Deposits

Calcium is also fortified in many food products. That means calcium has been added to a food that normally would not contain it. Some of the most common foods of this type are orange juice, cereals, and breads.

Calcium supplements are sold in a wide variety on the market. Typically they are sold in the form of pills. While supplements may provide the body with an adequate amount of calcium, the American Medical Association and the American Dietetic Association recommend that you get your calcium from food rather than from supplements. This is because supplements and pills are not a substitute for a nutritionally adequate diet. Supplements are intended to help meet the DRI- the daily recommended intake- and not meant to be taken in doses above that amount. There are no benefits to taking more than the DRI; in fact, high doses of calcium may interfere with the body's use of other nutrients.

Checks and Balances of Calcium Deposits

To maintain a positive balance of calcium, your goal is to reach the DRI each day. These are the current recommended adequate intakes to meet:

- 0 – 6 months: 210mg
- 6 – 12 months: 270mg
- 1 – 3 years: 500mg
- 4 – 8 years: 800mg
- 9 – 18 years: 1300mg
- 19 - 50 years: 1000mg
- 51+ years: 1200mg
- pregnant/lactating: <19 years : 1300mg; 19+ years : 1000mg

With the variety of calcium rich foods, it is easy to make the recommended deposit each day. Check the nutrition facts label on the product to find the exact amount of calcium in the food. Not keeping a minimum daily balance will increase your risk for developing osteoporosis in the future.

Other Causes of Osteoporosis

A lack of regular exercise may contribute to this disease as well. A “couch potato” lifestyle also prevents new bone formation, whereas regular physical activity protects against bone loss. Weight bearing exercise also promotes bone's growth.

The best way to keep your bones strong and healthy is to make a daily deposit of calcium by eating calcium-rich foods. Having a positive balance of calcium will help to prevent osteoporosis so that your bones may break only by sticks and stones.

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Menu Planning for Wellness: Nutrition and Readiness Are Inseparable

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Remember the dieter's plate? For many years, it was the only menu item that really catered to the health conscious among us. It usually came with cottage cheese, several pieces of fruit and a few crackers neatly arranged atop a lettuce leaf. These days, the foodservice industry has a lot more to offer their patrons concerned about calories, cholesterol, fat and other excess nutrients that may contribute to a diet-related disease. The key is to provide tasty options! No food or beverage, no matter how healthful, will provide benefit to the individual if it is unpalatable and thus unconsumed. Flavor is paramount to the enjoyment of food.

1. **Educating** the diner about good nutrition practices promotes positive health and optimal readiness for the soldier. Many of our soldiers are looking for more nutrition information and healthier dining options. We must be committed to focusing on the needs of the diner by providing the tools they need to make informed nutrition choices.
2. **The Dietary Guidelines for Americans emphasizes variety, balance and moderation.** Food preparation methods supporting healthy dining options include those with moderate or less fat and cholesterol. Calories may also be limited for those soldiers aiming to obtain and maintain a healthy weight. The Dietary Guidelines promotes the Food Guide Pyramid for variety and balance including ample intake of complex carbohydrates from grains, fruits and vegetables and recommends moderate intake of sodium and sugar.
3. **Menu Guidelines** – put selections of healthy menu items on the menu every day. Your customers will learn to expect them. When deciding which menu items to include on your menu, consider the following:
 - **Balanced Menu Plan** – remember most people eat with their eyes first. The key is diversity.
 - **Color** – Choose a pleasing combination of colors for the line. Avoid color clashes like beets next to tomatoes or monochrome or foods all similar in color like all white foods.
 - **Flavor/Tastes** – balance sweet, sour, spicy, bitter, salty and bland.
 - **Texture** – firm, soft, chewy, crisp, creamy, light, heavy. Also consider the food weights, whether your menu consists of both “light” and “hearty” items. For example, stews/casseroles with potatoes and beans is very starchy and hearty. Balance heavier entrees with lighter sides such as a non-starchy vegetable like carrots or fruit salad rather than offering peas or corn.
 - **Shape** – cubes, solid, ground, strips, slices. Basic knife skills when cutting vegetables or purchasing varying shapes of vegetables and garnishing can make a huge difference in their appeal.
 - **Preparation method** – broiled, baked, roasted, fried, stewed. A meal consisting of fried chicken, breaded fish and fried zucchini are similar.

Regardless of equipment limitations, do not offer too many similarly prepared food items.

- **Sauces** – gravy, tomato, no sauce.
- **Variety** –
 - Use the Food Guide Pyramid guidelines for variety and always substitute a menu item with “like” items. For example, substitute a vegetable with another vegetable.
 - No matter how popular a menu item is, do not schedule a particular popular food on the menu too often. Even a favorite menu item will soon become tiresome if served every day. This does not apply to short order items.
 - Adjust your menu seasonally to take advantage of items that are at their peak of quality and flavor as well as lowest price. Some fresh fruits and vegetables to check on your menu guide include strawberries, cantaloupe, watermelon, acorn squash, honeydew, peppers, and tomatoes.
 - Consider color coding menu items on your menu for reviewing balance of entrée items, etc.
 - Enrich customers’ experience by exposing them to new menu items and get feedback. Prime vendor opens up an opportunity to try new food items – how about cous cous, risotto, or paella as a change from the boring noodle or steamed rice dishes.

4. Nutrition Guidelines for Menu Planning

- Nutrition guidelines should be interpreted based on an overall diet, not by meal. For example, the guideline to keep intake to no more than 30% calories from fat applies to total calories from fat over an entire day or several days. Applying the 30% standards to single foods greatly limits the variety of foods in the diet and can be misleading. However, in order to provide lowfat choices and education to the diner you can use 30% as a target for “wellness” nutrition options.
- Your menus already likely offer many health-enhancing foods that are low in cholesterol and fat (and, therefore, calories) or provide good sources of fiber. All you need to do: ADVERTISE! A Registered Dietitian or 91M Hospital Food Service Specialist can help!
- A complete meal should consist of an entrée, vegetable and/or salad, starch or bread, fruit, skim or 1% milk and optional dessert depending on meal
 - Breakfast
 - Fresh fruits, canned fruits in light syrup or juice
 - Assorted juices
 - Whole or multi-grain breads, rolls, or bagels
 - Lowfat bran, corn, and fruit muffins (use lowfat mix)
 - Corn oil margarine or squeeze margarine
 - Lowfat or non-fat yogurt and cottage cheese

- Oatmeal, bran and other high fiber cereals. Criteria for a good cereal:
(≥ 5 g fiber, ≤ 8 g sugar, ≤ 3 g fat, ≤ 250 mg sodium)
- Low cholesterol eggs
- Skim or 1% milk
- Lunch and dinner
 - Sandwiches made with whole or multi-grain breads, rolls, pita bread, bagels and 2-3 oz meat/cheese (turkey breast, lean roast beef, water-packed tuna made with fat-free mayonnaise, part-skim cheese, light cheese)
 - Salad Bar
 - Selection of raw vegetables, canned legumes and vegetables, such as kidney beans, garbanzo beans, green peas, corn, etc.
 - Selection of fresh seasonal fruit, canned or dried fruits
 - Meats and cheeses (same as sandwiches)
 - Lowfat and fat-free dressings, vinegar and oil
 - Nonfat or lowfat yogurt and lowfat cottage cheese
 - Other selections
 - Meats – roasted, grilled, or broiled, served without gravy – offer accompaniments such as au jus, salsa, cranberry relish, etc, but on the side
 - Legume and grain-based meatless entrees
 - Vegetables – steamed without butter or margarine
 - Pasta and rice without butter or margarine
 - Soups – prepared with low sodium bases or use the guidelines listed to help sort options
 - Baked potatoes with lowfat or no-fat sour cream
 - Low calorie desserts such as fresh fruits, fresh fruit cup, rice pudding (made with skim milk), gelatin, lowfat/nonfat yogurt, fruit ices, oatmeal raisin cookies, angel food cake, lower fat cakes.

NOTE: Moderation is the key. One cookie can fit in a healthy meal plan, a handful does not.

5. Marketing

- ✓ LOGO: Advertise through a logo that shows the “wellness” choice. Do not use “lowfat” or “low calorie”. Patrons will equate it with low taste. Develop something that represents that particular dining facility, installation, or unit.

Labels can help guide nutrition choices. Guidelines for healthy eating may come from percent daily values on labels. However, for those soldiers who are more active their requirements will be much higher!

PERCENT DAILY VALUES ARE BASED ON 2000 AND 2500 DAILY CALORIE INTAKE:

		Per Meal		Per Meal
CALORIES	2000	667	2500	833
TOTAL FAT (30% or less)	≤ 65 g	≤ 22 g	≤ 80 g	≤ 27 g
CHOLESTEROL	≤300 mg	≤100 mg	≤ 300 mg	≤ 100 mg
SODIUM	≤ 2400 mg	<800 mg	≤ 2400 mg	≤ 800 mg
FIBER	25 g	8 g	30 g	10 g

Remember Balance! You must look at your diet based on an entire day or over several days... not just one meal. Individual calorie needs will vary depending on age, gender, activity, etc

Spice up your menu! – look for recipes that are simple, but full of flavor with herbs, seasonings, rubs, salsas, marinades, flavored vinegars. These ready-to-use items may be available from your prime vendor.

Which menu would you rather see on the menu board?

Vegetable Soup
Pot Roast
Baked Chicken
Parsley Buttered Potatoes
Steamed Rice
Broccoli
Lima Beans
Fresh Fruit Cup
Chocolate Chip Cookies
1% Milk
Tea

Fresh Garden Soup
Pot Roast of Beef
Italian Pepper Chicken
Lemony New Potatoes
Herb and Mushroom Rice
Steamed Seasoned Broccoli
Calico Beans
Fresh Fruit Cup
Choc-Oat-Chip Cookies
Ice-cold milk
Tea

- Take advantage of themes for marketing. Every month has observances you can use to promote special items or events. Check the ACES webpage for monthly observances and POCs. Also, get with your local dietitian for eating tips in preparation for road marches or day-long endurance events.

High Protein, Low Carbohydrate Diets: Eating to Your Health?

CPT Lori Hennessy, MHA, RD
U.S. Army Physical Fitness Research Institute

Sugar Busters! Protein Power. The Zone. Dr. Adkins New Diet Revolution. Hordes of Americans are swapping cereal and milk for bacon, eggs, and steak as the latest diet craze sweeps across the country. High protein, low carbohydrate diets are in and the Food Guide Pyramid and sensible eating is out. Since 1996, three of these diet books have spent a combined total of 75 weeks on the New York Times best seller list.

These diets all operate on the same basic principle: carbohydrates make you fat while protein helps you lose weight. Finally—what the American public has wanted to hear for years—eat all the beef, chicken, pork, and eggs you want and lose weight! In fact, the *Sugar Busters!* web site entices us to “forget about the fight against fat. Break the sugar-starch habit today and enjoy steak, eggs, cheese, even wine, as you get healthy and lose weight.” The authors make losing weight sound like fun.

The diets are all slightly different, but most claim that carbohydrates increase insulin levels in the blood which then causes carbohydrate, or sugar calories to be stored as fat. The truth about this statement is that insulin is released into the bloodstream when carbohydrates are consumed. However, carbohydrates are only stored as fat when one eats more calories than what the body requires. The bottom line is that people gain weight when they overeat, regardless of the source of those calories.

Some people who are fat around the middle do release more insulin when simple sugars (sodas, candy, cakes, cookies, honey) are consumed. The insulin quickly removes the excess sugars from the bloodstream. This does not necessarily result in more fat storage, but it does tend to increase the feeling of hunger again, which can lead to overeating. Therefore, eating carbohydrates does not cause problems with insulin; being overweight and inactive cause insulin problems.

Why do people lose weight on these diets? The meal plans recommended by these diets range from 850 to 2000 calories a day—significantly less than the average American consumes on a daily basis. Initial weight loss is primarily water loss as the body depletes its carbohydrate stores. Both carbohydrate and protein are stored in the body with lots of water. Later weight loss occurs as the body begins to “eat” its muscle tissue for energy since daily caloric intake is not enough to preserve muscle mass. Eventually the body may burn some fat stores, however, body fat may actually increase as a combined result of eating more fat and the body’s astute ability to hold on to fat stores as it uses muscle and other major organs for energy.

When too few carbohydrates are consumed, the liver converts body fat and dietary fat into energy. This condition called ketosis, produces ketones, which place extra stress on the liver and kidneys. If ketones are not excreted from the body, they can reach toxic levels. To reduce the risk of toxicity, diets with only 5 to 25 grams of carbohydrate per day should not be consumed for more than 14 consecutive days. Ketosis symptoms can include nausea, weakness, dehydration, fatigue, insomnia and a “fruity” breath. A diminished appetite is the most common

side effect. The Atkins, Sugar Busters!, and Protein Power diets, if followed correctly, lead to ketosis. So does the Zone at the lower calorie levels.

Another risk to eating high protein diets is the impact on heart disease. Most people will decrease blood cholesterol levels when losing weight, regardless of the type of diet. However, these diets can be much higher in fat than one typically consumes. The dangers of high-fat diets have been well documented as increasing the risk for heart attack, stroke, and some cancers. Another concern is that high protein, low carbohydrate diets are often low in potassium, vitamins A and C, folic acid, carotenoids, and fiber—all of which help to prevent certain cancers and heart disease.

So what do you do if you want to lose weight and maximize your nutrition intake? Follow the advice of the USDA's Food Guide Pyramid for portion sizes at <http://www.nal.usda.gov:8001/py/pmap.htm> and exercise regularly. To lose weight healthfully and maintain high levels of energy throughout the day, eat at least 3 meals a day and add small snacks if you are hungry. A good rule of thumb is to breakfast like a king, lunch like a prince and dinner like a pauper. Many Americans consume the majority of their calories at the end of the day, and not during the day when food (fuel) is needed.

The Skinny on Olestra

2LT Andrew Brown, RD
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More and more, people are looking for ways to reduce fat in their diet. Excess fat has been linked to heart disease and cancer. Several food manufacturers recognize the demand for lower fat foods, and have catered to the consumers by producing all sorts of low fat and fat free foods.

Recently, Olean, a fat substitute, began appearing in snack foods. Olean, also known as Olestra, is unique in the fact that it has the same mouthfeel and taste of regular fat, yet contains no calories. The following paragraphs provide details about this intriguing food additive.

Olean is heat stable and therefore can be used in the frying and baking of foods. Currently, that is the only usage for Olean approved by the Food and Drug Administration (FDA). The FDA approved the use of Olean to replace the added fat in snack foods such as potato, corn and tortilla chips, cheese puffs and cheese curls, and savory crackers. Olean can also be used in other food products such as salad dressing and ice cream, but will need approval from the FDA first.

Procter & Gamble, the maker of Olean, allows Frito-Lay to use Olean in some lowfat and fat-free items. The company uses Olean to fry its Lay's brand potato chips and its Doritos and Tostitos brand tortilla chips. Frito-Lay markets these chips produced with Olean as WOW! Chips. Procter & Gamble recently started using Olean to make Fat-Free Pringles and plans to use Olean in other products in the future.

Procter & Gamble makes Olean from table sugar and fatty acids found in vegetable oils. The fatty acids attach to the sugar in several places. Most fat molecules that we eat contain 3 fatty acids. An Olean molecule contains 6 to 3 fatty acids. The digestive tract cannot absorb this large molecule, and therefore, the Olean passes through the digestive tract undigested.

Because Olean passes through the digestive tract undigested, there could be potentially undesirable consequences of eating a large amount of Olean. That is, eating moderate amounts of Olean may not affect someone, but if a whole bag of WOW! chips were eaten, loose stools and cramping might be expected. The consumer is provided this information on the label.

On the back of packages of food containing Olean there is such an information label. The label reads: "This product contains Olestra. Olestra may cause abdominal cramps and loose stools. Olestra inhibits the absorption of some vitamins and other nutrients. Vitamins A, D, B, and K have been added."

The body needs six types of nutrients to function: protein, carbohydrate, fat, vitamins, minerals, and water. The body needs protein for the growth and maintenance of its tissues. Carbohydrate is the primary fuel source for the body. Fat is used for cushioning and insulation and as a secondary fuel source. Vitamins and minerals are partners in reactions in the body. Water provides a solvent for reactions to occur in the body.

Olean will not affect the absorption of carbohydrates, protein, fat, water-soluble vitamins, and minerals; however, it decreases the absorption of fat-soluble nutrients such as the fat-soluble vitamins A, D, B, K, carotenoids, and cholesterol, when eaten at the same time with Olean snacks. For example, if you ate WOW! potato chips and washed them down with a glassful of vitamin D rich milk, part of the vitamin D would not be absorbed. To combat this problem, vitamins A, D, B, and K are added to products made with Olean.

"What about the carotenoids?", you ask. Carotenoids are antioxidants found in fruits and vegetables that may help to decrease the risk of heart disease and cancer. Olean reduces the uptake of carotenoids. The FDA knew this when Olean was approved. The reduced uptake of carotenoids may or may not be significant according to recent studies.

So, how many calories can be saved with the usage of Olean? The savings of calories and fat are considerable. In the examples below, almost 50 per cent. All the fat can be cut out of regular potato chips. Most of the fat can be cut out of tortilla chips. (The remaining fat is from the corn.):

Fat and Calorie Reduction in 1 oz. of Snack Foods

	<i>Product Type</i>	<i>Grams of Fat per Oz.</i>	<i>Calories per Oz.</i>	<i>Caloric Savings</i>
Tortilla Chips:	Regular	7	140	---
	With Olestra	1	80	60
Potato Chips:	Regular	10	150	---
	With Olestra	0	75	75

So, should you or should you not eat Olean foods? I advise that you may eat Olean foods, but eat them in moderation. Just as with any food, too much of a good thing is not a good thing. And just because a product is fat free, doesn't necessarily mean that it is calorie free. Feel free to enjoy Olean foods in moderate amounts, but don't neglect the wonderful variety of other foods.

Creatine: The Magic Potion or Is It?

CPT Lori Hennessy, MHA, RD
Army Physical Fitness Research Institute

Creatine is the fastest selling nutritional supplement in the 90's. Sales of creatine products rose to \$100 million in 1997 and are expected to exceed \$200 million this year. Just what is all the hype about creatine?

What is creatine? It's a natural substance found in fish and raw meat. It is also made by the human body and stored in muscle. Creatine is used during high intensity exercise. Most people consume about 1 gram of creatine per day through dietary sources.

What can creatine do for you? Studies have shown that athletes **may** improve their performance by supplementing their diet with creatine. Some studies have suggested that creatine seems to improve performance during activities that require short, intense bursts of energy such as sprinting or weight training.

Advantages

- * Potential for increased energy during activities requiring short bursts of effort
- * Increased muscle mass if used with strength training program
- * Improved cell hydration
- * Muscle fatigue occurs later

Disadvantages

- * Requires athletes to drink larger quantities of water
- * Potential for danger is still unknown due to its "newness"
- * Expensive; some doses cost up to \$7.50 per day
- * Does not work without a serious training program
- * Side effects from long term use are not known

If you are taking creatine, how much should you take? Creatine is purchased in powder form and taken with water or juice.

For rapid creatine loading

5 teaspoons (or a total of 25 grams) per day for 6 days (1 teaspoon 5 times/day)

Cost: about \$7.50 per day

For no-load creatine supplementation

2/3 teaspoon (3 grams) for 30 days

Cost: about \$1.10 per day

For maintenance (after 6 days of loading or 30 days of no-load supplementation)

1/2 teaspoon (2 grams) per day

Cost: about 75 cents per day

Will more creatine make you perform better? No. The body can only store a certain amount of creatine. Some studies suggest that taking more than 40 grams of creatine a day may cause liver or kidney damage in some people.

The Bottom Line: Creatine will not build muscles or improve performance on its own. To be effective, a training program must accompany creatine supplementation. Even then, the improvements in performance may be small. Twenty percent of people taking creatine do not respond to creatine supplementation and performance does not change.

Warning! Athletes of any age taking creatine should do so under the supervision of a health care provider. The detrimental effects of creatine are still unknown.

Source: *Running & Fit News*, July 1998

Facts on Echinacea

CPT Lori Hennessy, MHA, RD
Army Physical Fitness Research Institute

What is echinacea? Echinacea is a purple cone flower that's native to North America. Both physicians and Native Americans used it as an antibiotic in the late eighteenth century. It is often referred to as the cold fighting herb.

Claims: an immune system booster to help prevent or relieve cold/flu symptoms, an antiseptic and mild antibiotic, a mild anti-inflammatory, and applied externally for wound healing.

Side Effects: Occasionally, individuals may experience short-term fever, nausea and vomiting. Those allergic to members of the sunflower family (Asteraceae) may have an allergic reaction.

Warning: There are not any reports of acute or chronic toxic reactions to echinacea. However, people with leukemia, tuberculosis, and autoimmune disorders such as lupus, rheumatoid arthritis, HIV, and multiple sclerosis should not use echinacea since it interferes with the immune system.

People misuse echinacea in one of two ways. Some people take echinacea every day to prevent colds or just once in a while for a quick pick me up. This is probably a waste of money since studies have shown that taking echinacea for longer than two months at a time may cause immune system problems. A study of 302 people found that echinacea was no better at preventing colds than a placebo. The second way that people misuse echinacea is that they start taking the herb after a cold has already set in. Echinacea is not as effective at this point. You have to take it at the first sign of a cold if you want to relieve cold symptoms. It's probably too late if you wait for more than three days.

Dosage: take 250 milligrams (standardized to contain 4% echinoside) every six hours for 2 days to help relieve cold/flu symptoms faster.

For more information on herbs and herbal supplements, contact the American Botanical Council at (512) 331-8868 or check out their web-site at <http://www.herbalgram.org>. For information on dietary supplements, search the National Center for Complementary and Alternative Medicine web site at <http://altmed.od.nih/nccam>. The U.S. Army War College Library in Root Hall also has some books on herbs.

Facts on Gingko Biloba

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What is gingko biloba? The gingko tree is the oldest living tree on earth. It's been in China for more than 200 million years and is now grown throughout the world for pharmaceutical purposes. Gingko biloba supplements are made from leaf extracts.

Claims: a memory booster, decongestant, improves blood flow, treatment for asthma

Side Effects: nausea, headache, rash, dizziness. Side effects are usually minimal.

Warning: Because gingko improves blood flow, it acts much like a blood thinner. Persons taking prescription anti-coagulants such as Coumadin, or other anti-clotting substances such as vitamin E, omega-3 fatty acids, or aspirin should discuss its use with their doctor. Taking too many anti-clotting substances can significantly prolong bleeding that occurs from a cut.

Research: An article published in the Journal of the American Medical Association reported that 27% of Alzheimer's patients who took 120 mg of gingko a day for at least 6 months scored better on memory tests than those taking a placebo. Fourteen percent of those who took a placebo also scored better on the memory tests. On the other hand, 73% of the patients taking gingko and 86% of those taking a placebo scored worse or the same on the memory tests. The current research demonstrates that gingko may be beneficial in improving or temporarily stabilizing memory in Alzheimer's patients. Very little research has been done on people without Alzheimer's.

Dosage: many of the research studies use 120 to 180 mg/day for at least 12 weeks

For more information on herbs and herbal supplements, contact the Herb Research Foundation at 800-748-2617 or check out the web site at <http://www.herbs.org>. To report an adverse reaction from a dietary supplement, contact the FDA MedWatch at 800-332-1088 or at www.fda.gov/medwatch.

Facts on St. John's Wort

CPT Lori Hennessy, RD
Army Physical Fitness Research Institute

What is St. John's Wort? St. John's Wort is a perennial plant with yellow flowers. This herb has been used as a medicinal since the Hippocrates era. Currently, it is the most often prescribed medication in Europe for the treatment of depression.

Claims: **Alleviates mild depression, anxiety, and nervousness; improves wound healing when applied topically; and increases production of the brain chemical serotonin which boosts mood and curbs overeating often associated with depression.**

Side Effects: Gastrointestinal irritation is the most common complaint, and increased sensitivity to the sun, especially in fair-skinned people.

Research: Recent studies show that St. John's wort may be as effective as anti-depressants in relieving the symptoms of *mild to moderate* depression. A current study at Duke University is examining whether or not St. John's wort is just as effective as Prozac in the treatment of depression. This herb probably does not relieve symptoms of severe depression. As an antidepressant, a standard dose is 300 milligrams (mg) of 0.3% hypericum three times a day for a total of 900 mg of hypericum per day. Hypericum or hypericin is a standardized extract of St. John's wort. The herb needs to be taken for at least six weeks before seeing a reduction of symptoms.

Warning: Herbal weight loss supplements such as Herbal Phen-Fen, Diet-Phen, and Herbal Phen Fuel contain both St. John's wort and a dangerous herb called ephedra. These herbal concoctions have been big sellers since two weight loss medications, Redux and Phen-Fen, were banned by the Food and Drug Administration last year. Persons taking ephedra and any ephedra-containing supplement should inform their health care provider since its use has been associated in more than 40 deaths and more than 800 adverse reactions.

For more information on herbs and herbal supplements, contact the American Botanical Council at (512) 331-8868 or check out their web-site at <http://www.herbalgram.org>. For information on dietary supplements, search the National Center for Complementary and Alternative Medicine web site at <http://altmed.od.nih/nccam>.

Facts on Ephedra

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Army Physical Fitness Research Institute

What is ephedra? Ephedra is a Chinese herb also referred to as Ma huang. It's been used in China for 5,000 years to treat asthma and upper respiratory infections. Ephedra's ingredients, ephedrine and pseudoephedrine, are compounds also found in many over-the-counter cold (Sudafed) and allergy medications as well as natural cold remedies.

Claims: **stimulates the central nervous system, suppresses appetite, increases metabolism, and acts as a decongestant and asthma reliever.**

Side Effects: abnormal heart rhythms, cardiac arrest, heart palpitations, increased blood pressure, dizziness, suicidal ideations, seizures and tremors, hyperactivity, insomnia, nausea and vomiting, and constipation. Side effects depend on the dose and the individual's health status.

Warning: Both the NCAA and the state of Florida ban the use of Ephedra. Since 1993, ephedra has been linked to more than 40 deaths and the Food and Drug Administration (FDA) has received more than 800 reports on adverse reactions to the herb. Foods containing caffeine and theophylline such as coffee, tea, cola, and chocolate exacerbate the effects of ephedra. The FDA has proposed that labels of ephedrine-containing products cannot suggest or recommend conditions of use that would result in 8 milligram (mg) or more to be taken in a 6-hour period or a total daily intake of 24 mg or more.

Do not take ephedra if you are pregnant, breastfeeding or under 18 years of age. You should not take ephedra if you are diagnosed with heart conditions, hypertension, glaucoma, thyroid disease, diabetes, psychiatric disorders, neurological disorders (seizures, Parkinson's disease), renal disease, or have difficulty urinating or have prostate enlargement. Also, do not take ephedra if you take MAO inhibitors, methyl dopa, any product containing ephedrine or pseudoephedrine, or medication for high blood pressure.

Bottom Line: Ephedra is a dangerous herb that should be used with caution. Taking this herb may result in heart attack, stroke, seizure or death. If you take ephedra, inform your health care provider. For more information on herbs and herbal supplements, contact the American Botanical Council at (512) 331-8868 or check out their web-site at <http://www.herbalgram.org>. For information on dietary supplements, search the National Center for Complementary and Alternative Medicine web site at <http://altmed.od.nih/nccam>.

Nutritious Defenses to Stress Eating

***attachment needed for this article, referred to in article.

1LT Deborah Robinson, RD
Luke AFB, Arizona

Stress can be a positive occurrence like getting married, starting a new job, or going on vacation. It can also be a negative occurrence like the death of a loved one, illness, loss of income, or family problems. We respond to stress is both physically and emotionally. Long-term stress is damaging to the body and increases our chance of becoming ill. In addition, many people respond to stress by overeating. In a survey of more than 1,000 adults, 79% of women and 69% of men reported stress eating. This information will help you how to change your emotional response to stress, decrease the occurrences of stress eating, and introduce you to dietary changes that can help combat the harmful effects of stress.

To change your response to stress, you must understand that stress does not lead directly to eating. Instead, a chain of events which is often referred to as an eating chain, leads to the response of eating. An event or person that triggers the stress starts the chain. This might be deadlines, phone interruptions, or a traffic jam. The next part of the chain is when you think about it. This is the time when you analyze the situation. You might be thinking that you have more to do than your coworkers, or you don't really want to go to that dinner meeting. Your thoughts then lead to your emotions. You might feel angry, anxious, tired, or frustrated. Finally you respond by eating the entire bag of cookies! The good news is that stress eating is a learned behavior, which means it is something you can change. Taking control of stress eating means changing your response by substituting an alternate activity. The key is identifying your personal eating chain and breaking the chain at the earliest links. See the sidebar entitled Taking Control of Stress for suggestions.

Stress can also damage our bodies physically, which might lead to back pain, headaches, difficulty sleeping, or even the common cold. Prolonged stress can lead to chronic health conditions like heart disease, stroke, cancer, or ulcers. However, studies have shown that eating a diet with plenty of fruits, vegetables, and whole grains is protective against the harmful effects of stress. Antioxidants and phytochemicals are substances found naturally in plant foods that can boost immune function and reduce risk of disease. The top 10 food sources of antioxidants are broccoli, cantaloupe, papaya, spinach, brussel sprouts, asparagus, carrots, tomatoes, peaches, and nectarines. Foods rich in phytochemicals include tomatoes, romaine lettuce, pink grapefruit, sweet potatoes, and soy products like soy burgers and tofu. To enjoy these health benefits, eat a minimum of 5 fruits and vegetables each day. A serving is $\frac{3}{4}$ cup of fruit or vegetable juice, $\frac{1}{2}$ cup of canned fruit or cooked vegetables, 1 cup of raw vegetables, or a medium piece of fruit. Try adding a "stress-busting smoothie" to your daily routine. They're easy to make and taste great!

Because stress is here to stay, it's something we need to learn to manage. By discovering what triggers stress, you can learn to change your response and decrease occurrences of stress eating. By eating healthy you can combat the harmful effects of stress. Increasing your intake of fruits, vegetables, and whole grains will help boost immune function and protect you from illness. So next time you're thinking about the Oreos in the cupboard, just remember that a single tomato has over stress reducing 10,000 phytochemicals!

Don't let the something happen

- ❑ Avoid the situation
- ❑ Change the situation- prioritize and pick the top 3 things you must do
- ❑ Identify the person or event that's causing your emotion

Think positive and action-oriented

- ❑ Focus on the solution, not the problem
- ❑ Change the conversation in your head from a negative to a positive one
- ❑ Read a book about positive self-talk

Don't let the emotion be in control

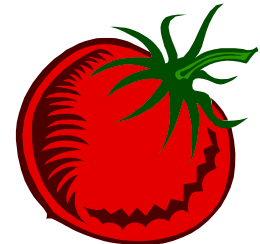
- ❑ Do a relaxation exercise
- ❑ Take a warm shower or bath
- ❑ Take a vigorous walk or do some other physical activity
- ❑ Laugh

Do something other than eating

- ❑ Read or listen to music
- ❑ Go to a movie
- ❑ Organize a messy drawer
- ❑ Spend time doing a hobby
- ❑ Take a walk or do some other physical activity

**TOP 10 FOOD SOURCES OF
ANTIOXIDANTS**

**Broccoli—Cantaloupe—
Papaya
Spinach—Brussel Sprouts
Asparagus—Carrots—
Tomatoes
Peaches—Nectarines**



STRESS-BUSTING SMOOTHIES

(Blend ingredients and enjoy!)

Berry-Banana Cooler: 1 cup strawberries or mixed berries, 1 banana, 1 cup low-fat vanilla frozen yogurt, and 5-6 cubes of ice

Mango Mania: 1 cup mango, 1 banana, 1 cup pineapple sherbet, and ice

Banana Split: 1 cup skim milk, ½ cup strawberries, 3 tablespoons chocolate syrup, 1 banana, 1 cup low-fat vanilla yogurt, and ice

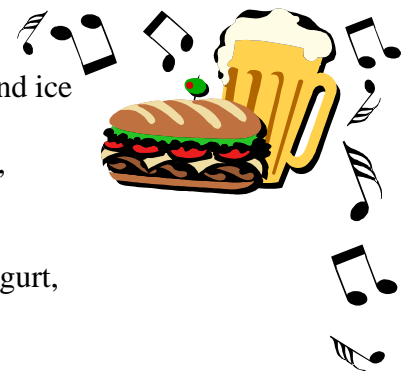
Creamsickle: 1 cup orange juice, 1 banana, 1 cup vanilla low-fat yogurt, and ice

PB & J: 1 cup apple juice, 2 tablespoons peanut butter, ½ cup strawberries, 1 banana, 1 cup low-fat vanilla yogurt, and ice

Lemon Squeezer: 1 cup berries, 1 banana, ½ cup low-fat vanilla frozen yogurt, ½ cup lemon sherbet, and ice

Pina-Coolada: ½ cup pineapple juice, ¼ cup shredded coconut, 1 banana, 1 cup low-fat vanilla frozen yogurt, and ice

Lime-onade: 2 tablespoons limeade, 2 teaspoons lemon juice, 2 teaspoons honey, 1 banana, ½ cup low-fat vanilla frozen yogurt, ½ cup lemon or lime sherbet, and ice



The prevalence of obesity in the U.S. has increased dramatically since 1980. Have our genes changed? Do we have less willpower than we had just 10-20 years ago? Some of the answers may be in changes which have evolved in our lifestyles and eating habits. When it comes down to it, Americans have access to a poor diet –to high calorie foods that are widely available, low in cost, heavily promoted and good tasting. These ingredients along with fewer manual jobs, more computers and television, and increased dependence on cars (meaning less activity) have contributed to an inevitable consequence – an epidemic of diet-related diseases, such as heart disease, diabetes and obesity-related health problems.

Americans are under constant pressure to eat. Food is everywhere! The food industry spends billions of dollars each year on advertising and promotions. One promotion that has contributed to excess calorie intake is larger “value” portions. “Value-meals” or “super-sized” portions are examples. Some restaurants have even dropped their “small” sizes due to poor demand. Grocery shopping is equally as challenging with “buy two, get one free”, multiple unit pricing breaks and larger snacks items such as “King-size” candy bars or “Grab bag” potato chips. Even the typical store bought muffin is triple the U.S. Department of Agriculture’s actual serving listed for a muffin.

Food has tremendous social and personal meaning as well. In some cases, “junk” foods have become synonymous with fun. Fitting in with the group may mean eating like everybody else and eating certain Brands and type of foods. Also, food can numb people from difficult or stressful situations.

But, just because foods come in bigger sizes does that make us eat more? Studies indicate “yes”. Over time, our sense of serving size has become distorted. Cutting calories for weight control means keeping portions in check. Assess your portion knowledge - measure out a serving of a food item as listed on the food label using measuring utensils and compare it to the portions you actually consume. You might be amazed at what 1 Tablespoon or ½ cup of a food item looks like on a plate. Remember calories listed on labels are based on the serving size listed.

So, how can you avoid eating more when eating out? Don’t hesitate to ask for a doggie bag! Share an entrée, appetizer or dessert. You’ll save money, calories and perhaps, your health!

What counts as a serving? The Food Guide Pyramid guides nutrition recommendations:

Bread, Cereal, Rice, and Pasta Group

One serving:

- one slice of bread
- 1/2 cup of cooked rice or pasta
- 1/2 cup of cooked cereal
- 1 ounce of cold cereal
- 1/2 bagel or English muffin

Vegetable Group

One serving:

- 1/2 cup of chopped vegetables (raw or cooked)

- 1 cup of raw leafy vegetables
 - 6 oz of vegetable juice
-

Fruit Group

One serving:

- 1 medium-sized apple, banana, or orange
 - 1/2 cup of cooked or canned fruit
 - 6 oz of fruit juice (like orange juice, grapefruit juice, or cranberry juice)
-

Milk, Yogurt, and Cheese Group

One serving:

- 1 cup of milk (8 oz)
 - 1 cup of yogurt
 - 1 1/2 to 2 ounces of cheese
-

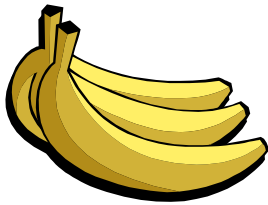
Meat, Poultry, Fish, Beans, Eggs, and Nuts Group

One serving:

- 2 to 3 ounces of cooked lean meat, poultry, or fish (about the size of a deck of cards)
 - 1 egg, 1/2 cup cooked dry beans (pinto, black, and navy are types of dry beans), or 2 tablespoons of peanut butter count as 1 ounce of lean meat
-

Fats, Oils, and Sweets

"Use sparingly." This is another way of saying eat only a little bit, and not very often.



POTASSIUM - MORE THAN JUST BANANAS

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Potassium ... the mineral necessary for maintaining normal blood pressure, transmitting nerve impulses, regulating fluid balance, and assisting muscle contractions. Although deficiencies are rare in healthy populations, the body can lose significant amounts with vomiting, diarrhea, extensive laxative use, or certain medications for high blood pressure. The results of a potassium deficiency include weakness, appetite loss, nausea, and fatigue.

There is no RDA (Recommended Dietary Allowance) for potassium. The DRV's (Daily Reference Values), however, were established in 1992 along with the new food label regulations to provide guidelines for substances not included in the RDA's. The Daily Reference Value for potassium is 3500 milligrams per day.

Does exercise deplete potassium in the body? In order to do so, the exercise must be prolonged, produce profuse sweating, and occur over a number of consecutive days to reduce potassium stores. For most exercise sessions, any potassium lost is easily replenished with a diet rich in fresh fruits and vegetables.

Due to their potassium content, bananas are often considered as THE food of choice. But numerous other food items can make significant contributions. Let's compare them to a medium banana.

Banana - 450 mg of potassium

Apricots, dried 1/4 cup	448 mg potassium
Avocado, fresh 1 medium	1204 mg
Beans, baked, can 1/2 cup	426 mg
Clams, 3 ounces	534 mg
Marinara sauce, 1/2 cup	530 mg
Milkshake, vanilla, 1 cup	631 mg
Milk, skim, 1 cup	406 mg
Orange, fresh, med	237 mg
Peanuts, 1/2 cup	480 mg
Potato, baked, med, with skin	844 mg
Raisins, 1/2 cup	598 mg
Strawberries, fresh, 1 cup	250 mg
Sunflower seeds, 1/2 cup	544 mg

Summer Traveling Nutrition Tips

CPT Sarah Flash, MBA, RD, CSP, LD
U.S. Army Quartermaster Center & School

School is out and summer vacation is here! You worked all winter to get in shape for that new bathing suit and now summer travels challenge meal choices and exercise routines. Planning ahead is the key to keeping physically active and choosing sound food alternatives when traveling. You've packed your clothes and maps, how about healthful snacks and exercise plans?

Some good traveling snack ideas include individual boxes of cereal, canned fruits, bagels and pretzels. Licorice, gum drops, or jelly beans are good choices for the sweet tooth. To avoid quick stops and fast eating, carry nutritious food items like cut up veggies in sealable plastic bags, lowfat cereal bars, crackers with peanut butter, and dried or fresh fruit. If you have space, pack a cooler with sandwiches (made with lean meats, cheese and lowfat condiments), lowfat yogurt and juice. If you do dine out, remember to choose smaller portions to keep calories down and if you choose a higher fat item, balance it with other lowfat items. When traveling through several time zones, continue to eat about every three to four hours apart, rather than eating extra meals. Finally, do not forget bottled water and start the day off with a nutritious breakfast!

Physical activity invigorates and makes long trips sitting on the road or in the air tolerable. Pack comfortable clothes and shoes for walking the nearest park or mall, checking out the hotel exercise equipment or making your vacation experience fun with activities such as rollerblading, biking, or hiking. Make the most of your summer vacation through a taste and fitness adventure!

Lowfat Oatmeal Cookies

2 Tablespoons vegetable oil, preferably canola

¼ cup applesauce

½ cup brown sugar

½ cup white sugar

1 egg or 2 egg whites

1 teaspoon vanilla

½ teaspoon cinnamon

½ teaspoon salt

½ teaspoon baking soda

1 teaspoon baking powder

1 ½ cups uncooked oats

1 cup flour, preferably half white and half whole wheat

½ cup raisins, ½ cup chopped nuts (optional)

Preheat oven to 375°. Mix together oil, applesauce, sugars, egg, vanilla, cinnamon, and salt.

Beat well. Add the baking soda, powder, and oats (and raisins and/or nuts); mix well, then gently stir in flour. Drop by rounded tablespoons onto a baking sheet treated with cooking spray. Bake for 10-12 minutes or until firm when lightly tapped with a finger. Yields: 22 cookies. Calories per cookie: 90



Fire Up the Grill for Lean Cooking

CPT Sarah Flash, MBA, RD, CSP, LD
U.S. Army Quartermaster Center & School

Nothing is better than a summer BBQ. Grilling lean meats (like sirloin, round, flank or loin), game, poultry or fish can be a great way to enjoy the taste of summer without all the fat. Lean meats have an enhanced flavor when marinated before grilling. You can marinate overnight or for a few hours. Try lite soy sauce, lemon juice and bouillon, lite Italian salad dressing, fruit juices or even a little light beer or wine with your favorite herbs. When grilling lean meats, keep in mind they cook more quickly -- so keep an eye on the meat as you grill. If you prefer chicken or fish, they may need some advance preparation. Spray the grill with non-stick spray before grilling to prevent sticking. Baste chicken with BBQ sauce, orange juice or a little oil to keep moist. Fish also may need some basting to stay moist or it can be wrapped in foil before placing on the grill.

Of course, no meal is complete without side dishes. To keep the kitchen cool, grill potatoes and vegetables outdoors. Prick potatoes to prevent bursting and rub with oil or wrap in foil before grilling. Vegetables such as peppers, squash, corn and mushrooms can be grilled as kabobs or in foil. A marinade or light oil baste helps keep veggies moist. Keep salad dressings light and choose lots of fresh produce to complete the meal. Keep with the cool theme and serve lowfat frozen yogurt with fresh berries or watermelon for dessert.

BEEF KABOBS (Recipe from 1,001 Low-fat Recipes)
Serves 6

Balsamic Brushing Sauce

1 teaspoon canola oil
1/3 cup balsamic vinegar
1/2 teaspoon dry mustard
1/2 teaspoon dried basil
1/2 cup fresh cilantro, or parsley chopped

Kabobs

6 wooden skewers, soaked in cold water 20 minutes and drained
1 lb lean beef tenderloin, or other lean beef, trimmed of all fat and cut into 1-inch pieces
1/2 lb large fresh mushrooms, cleaned and trimmed
2 red bell peppers, seeded and cut into squares
6 small summer squash, cut into halves
Vegetable cooking spray

Prepare grill. You can add additional flavor to meat by adding 3 to 4 cups hickory chips that have been soaked in cold water 15 minutes and drained.

Balsamic Brushing Sauce: Combine ingredients in small bowl, and place bowl near grill.

Kabobs: Thread each skewer alternatively with beef, mushrooms, peppers, and squash. Brush with sauce. When coals are ashen, coat grill with cooking spray and place kabobs on the grill. Grill 9 to 12 minutes, rotating kabobs every 3 to 4 minutes and brushing them with sauce when you turn. Meat should be done to just medium for best results. Serve on a bed of rice.

High Protein, Low Carbohydrate Diets: Eating to Your Health?

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Sugar Busters! Protein Power. The Zone. Dr. Adkins New Diet Revolution. Hordes of Americans are swapping cereal and milk for bacon, eggs, and steak as the latest diet craze sweeps across the country. High protein, low carbohydrate diets are in and the Food Guide Pyramid and sensible eating is out. Since 1996, three of these diet books have spent a combined total of 75 weeks on the New York Times best seller list.

These diets all operate on the same basic principle: carbohydrates make you fat while protein helps you lose weight. Finally—what the American public has wanted to hear for years—eat all the beef, chicken, pork, and eggs you want and lose weight! In fact, the *Sugar Busters!* web site entices us to “forget about the fight against fat. Break the sugar-starch habit today and enjoy steak, eggs, cheese, even wine, as you get healthy and lose weight.” The authors make losing weight sound like fun.

The diets are all slightly different, but most claim that carbohydrates increase insulin levels in the blood which then causes carbohydrate, or sugar calories to be stored as fat. The truth about this statement is that insulin is released into the bloodstream when carbohydrates are consumed. However, carbohydrates are only stored as fat when one eats more calories than what the body requires. The bottom line is that people gain weight when they overeat, regardless of the source of those calories.

Some people who are fat around the middle do release more insulin when simple sugars (sodas, candy, cakes, cookies, honey) are consumed. The insulin quickly removes the excess sugars from the bloodstream. This does not necessarily result in more fat storage, but it does tend to increase the feeling of hunger again which can lead to overeating. Therefore, eating carbohydrates does not cause problems with insulin; being overweight and inactive cause insulin problems.

Why do people lose weight on these diets? The meal plans recommended by these diets range from 850 to 2000 calories a day—significantly less than the average American consumes on a daily basis. Initial weight loss is primarily water loss as the body depletes its carbohydrate stores. Both carbohydrate and protein are stored in the body with lots of water. Later weight loss occurs as the body begins to “eat” its muscle tissue for energy since daily caloric intake is not enough to preserve muscle mass. Eventually the body may burn some fat stores, however, body fat may actually increase as a combined result of eating more fat and the body’s astute ability to hold on to body fat stores as it uses muscle and other major organs for energy.

When too few carbohydrates are consumed and the body uses protein for energy, a condition called ketosis occurs. The liver and kidneys have to work harder to process protein for energy, which increases the risk for liver or kidney damage. Symptoms of ketosis include nausea, weakness, dehydration, and a “fruity” breath. The Atkins, Sugar Busters!, and Protein Power diets, if followed correctly, lead to ketosis. So does the Zone at the lower calorie levels.

Another risk to eating high protein diets is the impact on heart disease. Most people will decrease blood cholesterol levels when losing weight, regardless of the type of diet followed. However, these diets can be much higher in fat than one typically consumes. The dangers of high-fat diets have been well documented as increasing the risk for heart attack, stroke, and some

cancers. Another concern is that high protein, low carbohydrate diets are often low in potassium, vitamins A and C, folic acid, carotenoids, and fiber—all of which help to prevent certain cancers and heart disease.

So what do you do if you want to lose weight and maximize your nutrition intake? Follow the advice on the USDA's Food Guide Pyramid for portion sizes and exercise regularly. To lose weight healthfully and maintain high levels of energy throughout the day, eat at least 3 meals a day and add small snacks if you are hungry. A good rule of thumb is to breakfast like a king, lunch like a prince and dinner like a pauper. Most Americans consume the majority of their calories at the end of the day, and not during the day when food (fuel) is needed.

Get Your Vitamins the Old Fashioned Way..The Safe Way!

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Today, as I was walking through the beauty aisle of my area food store I noticed something strange. An entire side of an aisle had vitamin and mineral supplements. Some supplement labels claimed to make your hair grow faster, to put you in a better mood and to lower your stress. Others were aimed at certain groups of people such as men, women and older people. More energy for your body was promised by another supplement label. How confusing health claims on supplement labels must be to consumers! No wonder people are taking large doses of vitamins hoping that if a little is good then more is better. There are important reasons why people should not take high doses of some vitamins.

This paper will show you how some vitamins can harm you if taken in high doses. The functions of vitamin D, A, B and C and the daily intake amounts will be reviewed. Toxic dosages and resulting side effects of each vitamin will be discussed. Food sources of vitamin D, A, B and C will be covered in hopes of helping you to choose from a variety of foods instead of taking high doses of vitamins.

VITAMIN D... THE TROUBLE WITH THEM

Vitamin D plays a very important role in your body. You need vitamin D to help build strong bones and teeth. Surprisingly, your body only needs 5 mcg (micrograms) of vitamin D daily. You can get 5 mcg of vitamin D a day by drinking fortified milk or eating butter, eggs or fatty fish (try salmon or mackerel). You can achieve daily vitamin D just by enjoying the sunshine. Rays of sunshine allow your body to make vitamin D.

However, if taken in high enough doses vitamin D can produce toxic effects. Side-effects include calcium deposits in the heart and kidneys which can lead to heart and kidney disease, high levels of calcium in the blood, which in turn can cause abdominal pain and loss of appetite, nausea and vomiting. Adverse effects are seen in 1 to 4 months of taking doses of 25,000 to 60,000 IU (International Units) per day. Instead of running the risk of experiencing ill effects, choose foods high in vitamin D or go for a 20 minute walk outside and enjoy the sunshine.

Vitamin A... Too Much? No Way!

Vitamin A performs many tasks in your body. Like vitamin D, vitamin A is needed to build strong bones and teeth. In addition, vitamin A promotes normal vision, prevents night blindness and ensures normal cell growth. The recommended dose is 700 RE (Retinal Equivalents) per day for men and 600 RE per day for women. Oranges, carrots, spinach, cantaloupe and apricots provide ample vitamin A making supplements useless. Fortified milk, liver, eggs and butter are also rich sources of vitamin A.

Unfortunately, long term doses (6 to 15 months) of vitamin A supplements of 16,000 RE per day can cause toxic side effects such as headaches, blurred vision, drowsiness, bone and joint pain, loss of hunger and loose stools, cracked skin and rashes, itching, hair loss and birth defects in pregnant women. Get your vitamin A the old fashioned way...the safe way!

Vitamin E...Will Protect Me!

Vitamin E has a unique role in the human body. Not only does vitamin E maintain healthy red blood cells but also protects lungs from harmful substances. Smokers and city dwellers may really need vitamin E's role to keep their lungs healthy! Daily recommended doses are 10 mg (milligrams) per day for men and 8 mg per day for women.

High enough doses vitamin E can cause heavy bleeding. This is very important if you are taking aspirin to prevent heart disease since aspirin also thins the blood. High doses such as 300 to 600 mg per day of vitamin E may produce nausea and vomiting. Little evidence is available that pinpoints the dosage needed to produce heavy bleeding. How do you avoid all of these potential problems? Get your vitamin E the old fashioned way... the safe way. Choose foods rich in vitamin E such as eggs, vegetable oils, fortified cereals, dark green leafy vegetables and nuts and seeds. Almonds are very high in vitamin E!

Vitamin C ...What's In It For Me?

Vitamin C is well known for preventing colds but did you know that it also promotes wound healing and healthy vessels, helps prevent heart disease and promotes the absorption of iron? In fact, people who are diagnosed by their doctor as being anemic are prescribed both iron and vitamin C. The recommended dose of vitamin C is 60mg per day for both men and women.

Under normal circumstances, you excrete any extra vitamin C your body does not need into your urine. Yet, very high doses of vitamin C such as 2,000 mg and above may cause diarrhea, bladder infections or kidney stones! Consuming foods high in vitamin C such as citrus fruits and juices, peppers, broccoli, berries and melons, to name just a few, will prevent the toxic side effects of vitamin C that are seen only with vitamin C supplementation.

CONCLUSION... END THE CONFUSION!

The message is clear. People must use caution when thinking about taking vitamins. Vitamin toxicities are less likely to occur when nutrients are derived from foods. Most nutrient toxicities occur by taking large amounts of vitamin pills. Vitamin supplements are not like money, more is not better. In fact, more could prove to be harmful. Get your vitamins the old fashioned way through food which is always the safest way.

Child Nutrition and Fitness: Who Are The Role Models In Your Child's Life?

1Lt Angela Velasco, RD
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Here is a wake-up call! Parents and caregivers impact their children's lifestyles. It's been shown that eating healthy and exercise begun in childhood may help prevent or postpone the onset of heart attacks, strokes, diabetes and some cancers. If you want your child to enjoy the benefits of a healthy lifestyle, be good role models. What are you eating? How active are you? This article will give you "10 hints" to help your children's health. Remember, your children are watching.

Hint #1, Start the day with a good breakfast. Breakfast is the first step towards a healthy diet. Ready-to-eat cereals, fruit, juice, milk, bread and other typical breakfast foods provide low-fat calories, carbohydrates, protein, vitamins and minerals. Think you don't have time for breakfast? Make time by getting clothes and work supplies ready the night before or waking up 10 minutes earlier.

Hint #2, Drink your milk. Your children are not the only ones that will benefit from drinking milk. Milk is one of the best sources of calcium. Most people don't get nearly enough calcium. The trouble is, our bodies need calcium everyday. Your children need calcium to build strong bones and teeth. Is your family getting enough calcium (example: 3 glasses of milk a day)? If you are concerned about the amount of calcium your family is getting talk to your primary care provider or a registered dietitian.

Hint #3, Get children involved in meal planning. Use the Food Guide Pyramid to explain why we need grains, fruits, vegetable, dairy and meat through out the day. Meal planning stimulates creative thinking. When children help with the meal planning they are exposed to the challenges of putting together a meal that everyone loves. It helps them understand and appreciate the importance of a good meal.

Hint #4, Teach your children at the commissary, don't just take them. When you bring your children to the commissary it can be a learning experience. Show them food labels and price tags. Explain to them why you purchase some items and not others.

Hint #5, Turn off the television at mealtime. Mealtime is a time to relax and teach your children about proper table behavior. It should be a time to talk about the day and enjoy a great meal.

Hint #6, Set times for family activities. Life can be very busy. `Many people have day planners so they don't forget important meetings or forget to do something of importance. We all believe that our families are very important. Why don't we schedule time with them in our busy day? If you cannot think of a reason, start doing it. Schedule time to walk the dog, go to the park or play a game to soccer.

Hint #7, Limit television and computer time. Is the television usually on in your house? Is your computer "on-line" a lot? Remember, your children are watching. In today's society, children are less active. They spend more time playing computer or video games, then play soccer or jumping rope. Set a good example, limit your television and computer time. The time you save can be spent playing with your children.

Hint #8, Purchase gifts that involve activity, such as a tennis racquet or a jump rope. Consider 'active' gifts, like a baseball glove or ballerina slippers more often than video or computer games.

Hint #9, Hold birthday parties at a roller rink, bowling alley or miniature golf course. Your children can have a lot of fun being active.

Hint # 10, Encourage participation, not just performance. Talk to your children about getting involved in school activities. If your children are already participating in extracurricular activities support their efforts. Attend their games or events and be supportive of them. Your children really care what you think.

Be a great role model. It's not only good for your children's health, it's also good for your health.

Chocolate for Dummies

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People of all nations have enjoyed chocolate for centuries. Americans crave chocolate, with its perfect combination of sweetness and bitterness, more than any other food. Unfortunately, myths surround chocolate that give it a bad name. Recent studies, however, have shown that there is nothing wrong with including small amounts of chocolate as a regular part of your balanced diet. This article will tell you all you ever wanted to know about chocolate and how to include it in a healthy diet.

All you ever wanted to know about chocolate.

Chocolate has a long history as a popular indulgence. It was first consumed as a drink in Latin America where it was discovered. Theobroma, chocolate's botanical name, means "food of the gods," in Greek. As indicated by its name, chocolate was consumed only by the highest in the Aztec society and acted as currency between the Mayas and Aztecs. Cocoa was brought to Europe in the late seventeenth century and Rodophe Lindt made the first chocolate candy when he took cocoa butter and added it back to cocoa powder. Today, Americans enjoy approximately eleven pounds of chocolate each year. We consume all of that chocolate, but do we really know where it comes from?

Believe it or not, chocolate and cocoa are made from seeds that grow in pods on cacao trees. Each pod contains anywhere from 20 to 50 beans or seeds. The pods resemble a football and measure about eight inches long and four inches wide. The first step of processing, fermentation, decreases the bitter taste of the cocoa. The seeds are then dried, roasted and hulled. The final product is either cocoa or chocolate. Over 400 compounds have been identified which lend to the flavor and aroma of chocolate.

Now that you know where chocolate comes from, let's address some of those myths you've all heard about. Dispelling some of the myths that surround chocolate is essential in enjoying it to its fullest.

Myth #1: Chocolate contains a lot of caffeine. One ounce of chocolate contains only six milligrams of caffeine, while one cup of brewed coffee has more than 100 milligrams of caffeine.

Myth #2: Chocolate can cause acne. Acne is caused by changes in hormone levels, particularly during puberty.

Myth #3: Chocolate causes headaches. A study conducted at the University of Pittsburgh found that chocolate did not play a significant role in triggering headaches.

Myth #4: Chocolate causes hyperactivity in children. No studies have conclusively shown that sugar or chocolate cause behavior changes in kids.

Myth #5: Chocolate increases serum cholesterol. Although most of the fat in chocolate is saturated, studies have shown that this type of saturated fat does not increase serum cholesterol.

Having disproven these five myths, we are one step closer to the total enjoyment of chocolate.

How to thoroughly enjoy chocolate without feeling guilty.

When eaten in moderation, chocolate can fit into almost any diet. Too much chocolate, however, may lead to weight gain and health problems. Chocolate contains calories and fat just like most foods you eat. If eaten in addition to your normal food intake, excess calories from chocolate will be stored as fat. By including small amounts of chocolate in your meal plan and staying flexible, you will be able to stay within your calorie range.

Eating remains a balancing act whether or not you include chocolate in your diet. The goal is to balance intake with output and maintain a healthy weight. You can do this by following the Food Guide Pyramid which recommends eating sweets on occasion in small amounts. When you do decide to add chocolate to your intake, it is important to adjust for this by making a trade-off. This may be achieved by eliminating the mayonnaise from your sandwich, choosing non-fat milk, or using non-fat salad dressing. Knowing the make-up of the foods in your diet and reading food labels will help you make good decisions about those trade-offs. An average candy bar contains about 250 calories and 12-15 grams of fat, so trade an item that is about the same in calories and fat. By substituting similar items for one another you will achieve a balance.

If you refuse to give up the regular salad dressing or the whole milk, you can stick with the low-fat versions of chocolate. Low-fat chocolate products are helpful in reducing the fat without changing the taste. Chocolate syrup, for example has only .3 grams of fat per two tablespoons. You can add this to low-fat ice cream, mix it with yogurt for a sweet-tasting dip, or add it to cream cheese for a tasty spread. Cocoa powder is another low-fat product that can enhance many foods. Replace chocolate with cocoa powder in baked items and add it to hot cereal for a special treat.

Another key to achieving chocolate success is satisfying your chocolate cravings. Ignoring cravings can lead to overeating. Satisfying a craving does not mean that you can eat as much chocolate as you want. It means eating a small amount so that your craving is satisfied. Eat a Halloween-sized candy bar or bake chocolate chip cookies using lowfat chocolate chips.

Including chocolate in your diet is easy and may make your day a little more enjoyable. Think moderation and remember to make trade-offs to avoid eating extra calories and fat. Now that you know how to include chocolate in a healthy diet, go practice!

P B and J: It's Not Just Kid Stuff Anymore

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Come out of the closet all you *Arachibuturophobics* (and that means you, if you're afraid of having peanut butter stuck to the roof of your mouth) over the age of twelve. Rejoice! Break out the grape jelly, a couple slices of bread and, of course, the peanut butter. Sit back and savor your own little taste of heaven, without any of the guilt.

No guilt, you say? Absolutely not. Because peanut butter and jelly is not just for kids anymore. In fact, it's so full of nutrients everyone should be eating it, especially grown-ups. As a body ages, moving past twelve, through the 20's, 30's, 40's and even beyond (yes, as I so often remind my twelve year old, there is life after 40), it changes. Along with those changes come more risk for a variety of diseases related to aging; like heart disease, cancer and diabetes. You're no doubt wondering what peanut butter has to do with any of this, am I right? Well, the food choices we make today go a long way in helping us to prevent the negative effects of aging from disease processes tomorrow. There are certain nutrients that help us to stay healthy as we grow older; nutrients like monounsaturated fat, protein, fiber, vitamin E, folate and the mysterious phytochemicals. Guess what food has all of those great nutrients, and then some? Why, peanut butter, of course! So while my daughter enjoys her P B & J, the rest of us will look at the real value of peanut butter, and hopefully, put an end to the guilt forever.

We'll begin with fat, the biggest hurdle that peanut butter has to overcome. In this era of fat-phobia, peanut butter has been considered poison. In fact, when most people think of fat, they normally think "ugh." While I can't deny that peanut butter does contain a high amount of fat, it's important to remember that not all fats are created equal; so, it's not the *amount* that matters, it's the *type*. There are two types of fat. They are saturated (the bad fat) and unsaturated (the good fat). Saturated fat is bad because it raises low density lipoproteins (LDLs), cholesterol and triglycerides; all bad elements in blood which are major causes of heart disease. These fats are found mainly in foods from animals such as meats, whole fat dairy products and eggs. On the other hand (the non-sticky one), unsaturated fat is good because it lowers LDLs, the bad element, but does not lower high density lipoproteins (HDLs), the good element. Unsaturated fat comes from plant sources and helps to prevent heart disease. Peanut butter has both saturated and unsaturated fat. The good news is nearly 80% of the fat in peanut butter is unsaturated (the good stuff). Just so you fat-phobics know, fat is important in the diet because it carries and stores fat soluble vitamins (A, D and E), helps maintain healthy skin and is the most concentrated source of energy available (9 calories per gram).

Now let's talk about protein. Protein is important because it helps to maintain fluid levels, repair body tissues, and make antibodies, which help to fight off disease and infection. Just like fat, there are two kinds of protein: animal protein, from animal sources, like meat, dairy products and eggs; and plant protein, from plant sources, like nuts, seeds, beans and legumes. Just as the two types of fat are not equal, neither are the two types of protein. Animal protein contains cholesterol and saturated fat (both bad for your heart), while plant protein does not. Therefore, plant protein is more heart healthy. Can you guess what kind of protein peanut butter contains?

You guessed it, plant protein---which has all the benefits of protein without any of the negative side effects.

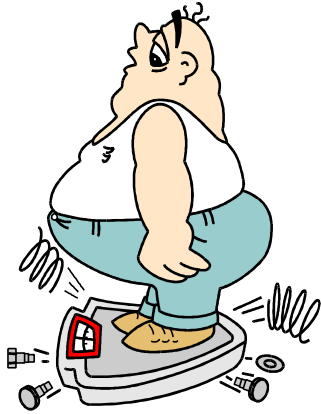
Fiber's next. As long as you can still count to two, you'll be all right here because (yup) there are also two kinds of fiber. There's the soluble kind that's found in fruits, oats and whole grains; and there's the insoluble kind found in vegetables, oats, whole grains and cereals. With her mouth full, my twelve-year-old asks, "What's the difference?" I reply, "The soluble kind helps to lower your cholesterol. It also helps to control blood sugar levels which can protect you from diabetes. Insoluble fiber may reduce the risk of some types of cancer, like colon cancer, while helping to prevent constipation. Don't talk with your mouth full, Dear." (Note: In order to get the benefits of fiber from peanut butter, you have to eat the crunchy kind.)

Vitamin E is an antioxidant, which means that it prevents body cells from becoming cancer cells by stopping the formation of free radicals. Free radicals are linked to a wide range of diseases, like coronary artery disease. Since the risk of coronary artery disease increases with age, it is important that older people (anyone over the magic age of twelve qualifies) get enough vitamin E from their diet. Good sources include nuts, seeds, whole grains and vegetable oils. Peanut butter is made from peanuts and contains 2 mg of vitamin E per 2-tablespoon serving. That makes it a good source of vitamin E.

As long as we're on the subject of vitamins, let's talk about folate, a B vitamin. Peanut butter has folate; you probably already suspected as much. But did you know that eating at least 400 mcg daily might lower the risk of heart disease? Folate works along with vitamins B6 and B12 to remove the amino acid, homocysteine, from the body. Too much homocysteine can damage arteries and/or increase plaque build-up in arteries. Good sources of folate are orange juice, green leafy vegetables, beans, broccoli, fortified breakfast cereals, enriched grain products and, oh yeah, P B & J. A peanut butter and jelly sandwich provides 22% of the total daily requirement for folate.

Have you heard the term "phytochemicals?" Other than the fact that they are plant chemicals, they remain a relative mystery to the scientific world. In fact, scientists are not really sure of all of the things they can do, nor can they seem to reproduce them in a lab. They strongly suspect, though, that phytochemicals can help protect our aging bodies from heart disease and cancer. Resveratrol is a phytochemical found in peanuts and peanut butter. Scientists think it either collects cholesterol from the blood or prevents cholesterol from attaching to artery walls. In either case, it is a heart healthy substance. One more thing, resveratrol may also prevent cancer by either halting the growth, or preventing the spread, of damaged cancer cells.

So now you know the miracle of peanut butter: the nutrients it contains (unsaturated fat, protein, fiber, vitamin E, folate, and phytochemicals) and how those nutrients can protect you from heart disease, cancer and diabetes. What I haven't told you is how much you have to eat to ensure that kind of safety. The answer is simple, by eating 2-4 ounces of peanut butter, or a peanut butter and jelly sandwich, four-five times per week, you will reap all of the nutritional benefits. In the spirit of practicing what I preach, I believe I'll make myself a P B & J. Pass Mommy the peanut butter, Dear.



Trim the Fat....Not the Flavor!!
CPT Sarah Flash, MBA, RD, LD, CSP

(ACES Webpage 1998)

Everybody appreciates tasty food. Unfortunately, a healthy appreciation for food may also bring an unhealthy dose of fat if the proper choices are not made. And....many diners perceive that lowfat means giving up favorites or sacrificing convenience for taste. Delicious, nutritious, lowfat food does not have to lack flavor! Encouraging diners to adopt lower fat eating patterns entails tackling those negative perceptions and barriers to making healthy choices by providing nutritious, tasty foods. All those old standbys like baked chicken, steamed vegetables, and plain potatoes can get boring. All it takes is a little pizzazz to revitalize healthier lowfat choices. In fact, reducing fat can mean enjoying more flavor, not less!

Top 10 Tips to Keep Flavor While Cutting Fat:

1. **Season with herbs and spices.** Herbs and spices add two important ingredients to foods--aroma and taste. Herbs and spices provide a variety of flavors when used alone or mixed together.
2. **Liquid marinades for meats.** Flavored vinegars, wine vinegars, citrus/tomato juices, marinades and broths add tang and help tenderize meats. Vinegars come in many flavors such as raspberry or balsamic.
3. **Use flavors from around the world.** Here are some suggestions-
 - Oriental - ginger, sesame seeds, hot peppers, mustards, teriyaki sauce
 - Caribbean - curry, cilantro, ginger, mint, allspice, chili powder, garlic
 - Mexican - chili pepper/powders, garlic, cilantro, oregano, thyme, cinnamon
 - Indian - curry, cinnamon, garlic, ginger, mint, cardamom, chili powder
 - Italian - Basil, garlic, oregano, tomatoes, wine
 - Greek - garlic, lemon juice, oregano, thyme, parsley
4. **“Rubs”.** Rubs are a blend of spices that are rubbed into food to form a zesty coating. Great on meats. Rubs can come prepackaged or made from scratch.
5. **Lowfat condiments.** Salsa, barbecue sauce, teriyaki sauce, chutney, preserves, and pickled vegetables make good marinades or toppings.
6. **Cooking sprays.** Cooking sprays come in various flavors and allow for sautéing with less fat. A spritz of spray adds only seven calories and one gram of fat compared to 120 calories and 14 grams of fat per Tablespoon of oil!

7. **Awaken those steamed vegetables or rice.** Consider mixing with a 50/50 mix of fruit juice and vegetable broth. Lemon or lemon pepper can give plain vegetables some zip.
8. **Replace the oil.** Substitute applesauce, yogurt, or strained fruit with an equal portion of oil in cakes, brownies and muffins.
9. **Don't overcook vegetables!** Remember the 7 minute rule for cooking vegetables to prevent overcooking. Overcooked vegetables are unattractive and can lose nutrients. Do not use baking soda because it can destroy nutrients!
10. **Presentation, Presentation, Presentation!** How appealing a food item looks to the diner will make a difference when the challenge is encouraging better choices. Don't forget the garnishes. Make the package attractive!

Try these tasty recipes on your favorite meat:

LEMON-ROSEMARY MARINADE

14 oz chicken broth
1/2 cup lemon juice
1/2 cup olive oil
1 Tbsp dried rosemary
4 tsp grated lemon peel
1/2 tsp black pepper

Mix ingredients. Makes about 2 1/2 cups.

SOUTHWESTERN RUB (TEX-MEX)

3/4 cup cumin
3 Tbsp coriander
1 1/2 tsp ground cinnamon
1 Tbsp dried oregano
2 1/4 tsp black pepper
1 1/2 tsp garlic powder
1 1/2 tsp onion powder
3/4-1 1/2 tsp cayenne pepper

In a skillet over medium heat, toast cumin, coriander, and cinnamon for 4 minutes or until fragrant and color starts to darken. Stir frequently. Cool. Stir in remaining ingredients. Makes 1 cup.